CLAIMS:

1. A process for implementing a redundant switched full-duplex Ethernet type communication network including at least two independent elementary networks, each elementary network including at least one source subscriber equipment and at least one destination subscriber equipment, connected to each other through at least one physical link through at least one switch, each equipment being connected to each of these elementary networks, the process comprising:

performing a frame by frame redundancy on each elementary network.

2. A process according to claim 1, wherein there are two elementary networks.

3. A process according to claim 1, wherein performing the frame by frame redundancy comprises, for an elementary network transmitting frames:

adding a numbering field in each frame transmitted through the switch to insert a frame number; and

sending each frame with the added numbering field on each of the elementary networks.

4. A process according to claim 3, wherein the performing the frame by frame redundancy comprises, for an elementary network receiving the transmitted frames:

storing the received frame number; and

accepting the received frame only if its frame number has not already been received.

5. A process according to claim 4, wherein the accepting only accepts a frame received within a given time window.

6. A process according to claim 4, wherein the virtual link concept is used, which is a conceptual view of a link from a source equipment to at least one destination equipment.

7. A process according to claim 6, wherein a virtual link number is accepted in the numbering field.

8. A process according to claim 6, wherein a virtual link is characterized by:

a transfer direction, the virtual link being single directional;

a source equipment;

one or plural items of destination equipment;

a fixed passband;

a maximum guaranteed time for transfer of packets from a source equipment to a destination equipment;

a fixed path on the network; and

a unique identifier.

9. A process according to claim 1 used for implementation of a redundant switched full-duplex Ethernet type communication network in avionics.